

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/07/2009 has been entered.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Hary Smith at (203) 925-9400 on 09/17/2009 and 09/23/2009.

The examiner amendment as follow:

Claims 5, 8 and 21 are cancelled.

Claim 1. A method comprising:

establishing a secure tunnel between a security gateway in an second network and a mobile terminal located at a first address in a first network, wherein the first network is a public packet network and the second network is a private packet network

and the security gateway connects the first network to a second network and the mobile terminal has a second address that identifies the mobile terminal in the second network;

in the security gateway, identifying the secure tunnel based on the second address in packets destined for the mobile terminal from the second network

detecting a change in the first address of the mobile terminal;

in response to the detecting step, sending an update message to the security gateway, wherein the update message includes a new address value of the first address; and wherein the update message also includes data to be transmitted to the security gateway; and

based on the update message, updating the first address associated with the secure tunnel; wherein sending comprising creating an update message includes a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 6. An apparatus, comprising:

tunnel establishment means for establishing a secure tunnel to a security gateway through a packet network; wherein the security gateway is configured to connect a first network to a second network, the first network being a public packet network and the second network being a private packet network, the security gateway is in the second network and the mobile terminal has a first address that depends on its current location in the first network and a second address that identifies the mobile terminal in the second network; and

address update means for sending an update message through said secure tunnel to the security gateway when the first address changes, wherein the update message includes a new address value of the first address, and wherein the update message also includes data to be transmitted to the security gateway; wherein said address update means comprises means for creating an update messages including a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 9. An apparatus, comprising:

tunnel establishment means for establishing a secure tunnel to a mobile terminal located at a first address in a first network, wherein the security gateway is in a second network and configured to connect the first network to a second network, the first network being a public packet network and the second network being a private packet network, and the mobile terminal has a second address that identifies the mobile terminal in the second network;

identification means for identifying the secure tunnel based on the second address in a packet originated from the second network and destined for the mobile terminal; and

address update means for updating the first address associated with the secure tunnel, the address update means being responsive to a message received from the mobile terminal, the message including a new value of the first address; wherein said

address update means comprises means for creating an update messages including a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 10. A system, comprising:

tunnel establishment means for establishing a secure tunnel between a security gateway in a second network and a mobile terminal located at a first address in a first network, wherein the first network is a public packet network and the second network is a private packet network, the security gateway is configured to connect the first network to a second network, and the mobile terminal has a second address that identifies the mobile terminal in the second network;

detection means for detecting a change in the first address;

first address update means, responsive to the detection means, for sending an update message to the security gateway, wherein the update message includes a new address value of the first address, and wherein the update message also includes data to be transmitted to the security gateway;

in the security gateway, second address update means for updating the first address associated with the secure tunnel in response to the update message; and

in the security gateway, identification means for identifying the secure tunnel based on the second address in a packet originated from the second network and destined for the mobile terminal; and

update messages creating means for including a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 11. A computer useable storage medium having computer readable program code embodied therein to enable a mobile terminal to communicate with a security gateway in a packet-based communication system, the computer readable program code comprising:

computer readable program code configured to cause the mobile terminal to establish a secure tunnel to a security gateway through a packet network; wherein the security gateway is configured to connect a first network to a second network, the first network being a public packet network and the second network being a private packet network, the security gateway is in the second network and the mobile terminal has a first address that depends on its current location in the first network and a second address that identifies the mobile terminal in the second network; and

computer readable program code configured to cause the mobile terminal to send an update message through said secure tunnel to the security gateway when the first address changes, wherein the update message includes a new address value of the address, and wherein the update message also includes data to be transmitted to the security gateway;

further comprising creating an update message including a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 12. A computer useable medium having computer readable program code embodied therein to enable a mobile terminal located at a first address in a first network to communicate with a security gateway in a packet-based communication system, the security gateway being in a second network and configured to connect a first network to a second network, the first network being a public packet network and the second network being a private packet network, and the computer readable program code comprising:

computer readable program code configured to cause the mobile terminal to send an update message through a secure tunnel to the security gateway when a first address that depends on the mobile terminal's current location in the first network changes, wherein the update message includes a new address value of the first address, and wherein the update message also includes data to be transmitted to the security gateway; further comprising creating an update message including a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 13. A method, comprising:

establishing a secure tunnel from a first network to a security gateway in a second network through a packet network; wherein the security gateway is configured to connect a first network to a second network, the first network is a public packet network and the second network is a private packet network, and the mobile terminal has a first address that depends on its current location in the first network and a second address that identifies the mobile terminal in the second network; and

sending an update message through said secure tunnel to the security gateway when the first address changes, wherein the update message includes a new address value of the first address, and wherein the update message also includes data to be transmitted to the security gateway; wherein sending comprising creating an update message including a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 14. A method, comprising:

establishing a secure tunnel from a second network to a mobile terminal located at a first address in a first network, wherein the security gateway is configured to connect the first network to a second network, the first network is a public packet network and the second network is a private packet network, and the mobile terminal has a second address that identifies the mobile terminal in the second network;

identifying the secure tunnel based on the second address in a packet originated from the second network and destined for the mobile terminal; and

updating the first address associated with the secure tunnel, in response to a message received from the mobile terminal, the message including a new value of the first address;

further comprising creating an update message including a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 15. An apparatus, comprising:

a control unit, configured to a memory unit including computer program code, the memory unit and the computer program code configured to, with the control unit, cause the apparatus at least to, establish a secure tunnel from a first network to a security gateway in a second network through a packet network, wherein the security gateway is configured to connect a first network to a second network, the first network is a public packet network and the second network is a private packet network, and a mobile terminal has a first address that depends on its current location in the first network and a second address that identifies the mobile terminal in the second network, and send an update message through said secure tunnel to the security gateway when the first address changes, wherein the update message includes a new address value of the first address, and wherein the update message also includes data to be transmitted to the security gateway; wherein the control unit is further

configured to create an update message including a network address translation discovery payload configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 16. An apparatus, comprising:

a control unit, configured to a memory unit including computer program code, the memory unit and the computer program code configured to, with the control unit, cause the apparatus at least to,

establish a secure tunnel from a first network to a security gateway in a second network through a packet network, wherein the security gateway is configured to connect a first network to a second network, the first network is a public packet network and the second network is a private packet network, and the mobile terminal has a first address that depends on its current location in the first network and a second address that identifies the mobile terminal in the second network,

identify the secure tunnel based on the second address in a packet originated from the second network and destined for the mobile terminal, and

update the first address associated with the secure tunnel, being responsive to a message received from the mobile terminal, the message including a new value of the first address; and creating an update messages including a NAT-D payload

configured to detect a network address translation device between the mobile terminal and the security gateway.

Claim 17. The apparatus of claim 16, further comprising a stored table mapping the second address with the secure tunnel, and wherein the control unit is further configured to use the table to identify the secure tunnel.

Allowable Subject Matter

3. The following is an examiner's statement of reasons for allowance:
4. Claims 1, 3, 4, 6, 7, 9, 10-16, 17, 18 and 19-20 and 22 are allowable according to applicant's remarks filed on 07/07/2009 and further based on the examiner's amendment of 09/17/2009.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIET DOAN whose telephone number is (571)272-7863. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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